Acta Arachnologica, 52(1): 35–42, July 31, 2003

Two New Species and Two Newly Recorded Species of the Spider Family Pisauridae (Arachnida: Araneae) from Japan

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Abstract — As a result of a series of faunal surveys of spiders of Okinawa Prefecture, southernmost Japan, following seven species were recognized to occur in the family Pisauridae: *Hygropoda higenaga* (Kishida 1936), *Perenethis venusta* L. Koch 1878, *Dolomedes yawatai* Ono 2002, *D. orion* n. sp., *D. zatsun* n. sp., *D. horishanus* Kishida 1936, and *Pisaura bicornis* Zhang & Song 1992. Descriptions of the two new species, *Dolomedes orion* and *D. zatsun*, are presented. *Dolomedes horishanus* and *Pisaura bicornis* are the species whose occurrences in Japan were recognized for the first time. Redescriptions of those two species based on the specimens collected from Okinawa Prefecture are also provided. *Dolomedes mizhoanus* Kishida 1936 known from Taiwan is newly synonymized with *D. horishanus*. *D. yawatai*, which was described from Ishigaki-jima Island, was found to occur also in Iriomote-jima Island. *D. okinavensis* Kishida 1924 is considered as *nomen dubium* and hence removed from the species list of Japanese Pisauridae.

Key words — Pisauridae, *Dolomedes, Pisaura*, new species, new records, Japan

Through a series of the faunal surveys of spiders in Okinawa Prefecture, southernmost Japan, which have been made two or three times a year since the spring of 1983, my colleagues and I have accumulated many specimens of the spiders belonging to the family Pisauridae. After a close examination, I classified them into seven species on the basis of their morphology. Of these, three species, *Hygropoda higenaga* (Kishida 1936), *Perenethis venusta* L. Koch 1878, and *Dolomedes yawatai* Ono 2002, were the spiders already known from Japan (Tanikawa 2003). Two of the remaining four species were *Pisaura bicornis* Zhang & Song 1992 and *Dolomedes horishanus* Kishida 1936 so far known only from China and Taiwan, respectively, as is redescribed in this paper based on the specimens collected during the surveys. For the remaining two species, I recognized them as new, and hence I will also present descriptions of the two new species below.

The type specimens designated in this paper are deposited in the collection of the Department of Zoology, National Science Museum, Tokyo (NSMT).

I wish to express my heartfelt thanks to Dr. Tadashi Miyashita, University of Tokyo, for critical reading of the manuscript. I am deeply indebted to Mr. Takeshi Sasaki, University of the Ryukyus, for his kind help in Okinawa-jima Island and offering invaluable specimens. My sincere thanks are also due to Mr. Akihiko Yawata, Tokyo, and Mr. Yuki Baba, University of Tokyo, for offering valuable specimens. I also thank two anonymous referees for their useful comments.

Description

Family Pisauridae

Genus *Dolomedes*

Dolomedes orion new species

[Japanese name: Ô-hashirigumo]

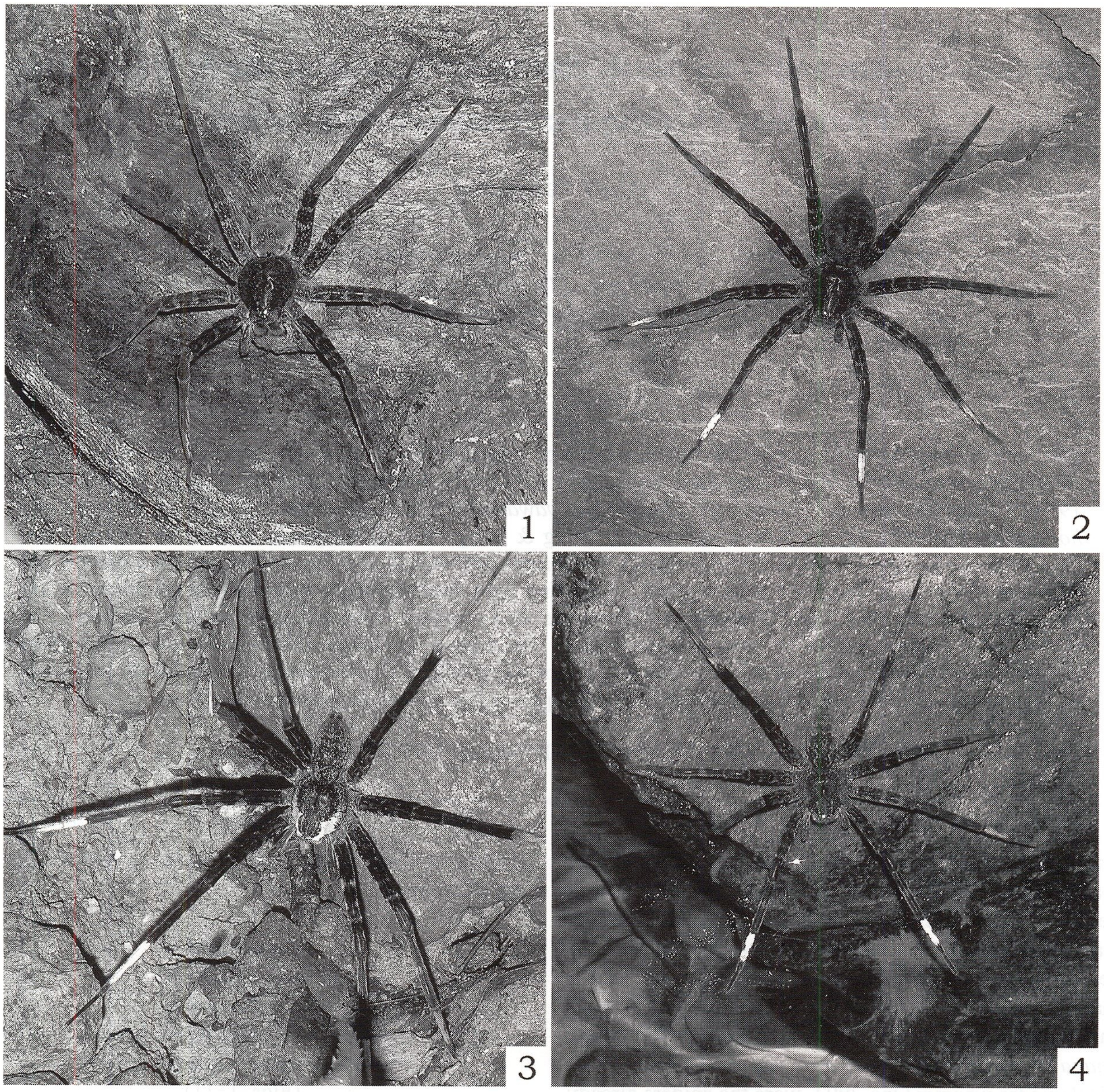
(Figs. 1–11)

Type series. Holotype: ♀, the source of Zatsun River, Kunigami-son, Okinawa-jima Is., Okinawa Pref., Japan, 24–VII–2002, A. Tanikawa leg. (NSMT-Ar 5306).

Paratypes: 1♀, same data as the holotype (NSMT-Ar5307); 2♂, Yona, Kunigami-son, Okinawa-jima Is., Okinawa Prefecture, 25–VII–2002, A. Tanikawa leg. (NSMT-Ar5308–5309).

Other specimens examined. 5♀1♂, Santarô Pass, Sumiyô-son, Amami-ôshima Is., Kagoshima Pref., 27–VIII–2002, A. Tanikawa leg.; 2♀1♂, Tokashiki-jima Is., Okinawa Pref., 24–VIII–2001, A. Yawata leg.

Description. Based on the female holotype and one of male paratypes (NSMT-Ar 5308). Measurements (in mm). Body ♀32.5, ♂27.5 long. Carapace ♀17.1, ♂14.0 long; ♀18.5, ♂14.4 wide. Length of legs [female/male; tarsus + metatarsus + tibia + patella + femur = total]: I, 7.2 + 13.7 + 15.5 + 8.9 + 17.6 = 62.9/8.9 + 15.3 + 15.9 + 7.6 +

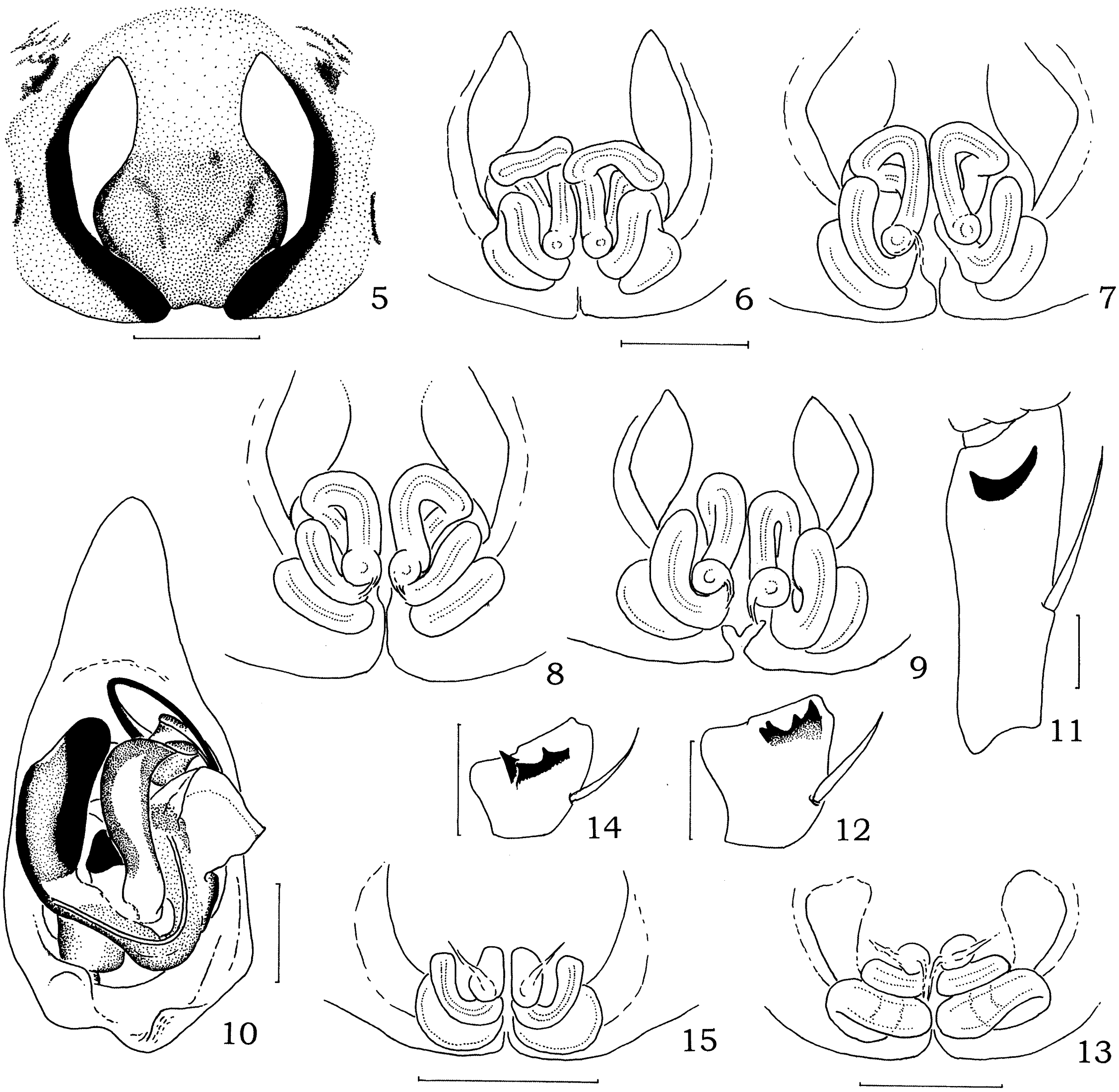


Figs. 1–4. *Dolomedes orion* n. sp. — 1, female holotype (NSMT-Ar 5307), holding her egg-sac; 2, another female; 3, male paratype (NSMT-Ar 5308); 4, juvenile in ambush.

16.8 = 64.5; II, 6.5 + 14.4 + 16.4 + 8.8 + 18.9 = 65.0/7.6 + 15.0 + 16.0 + 7.9 + 17.6 = 64.1; III, 6.2 + 14.2 + 15.6 + 8.45 + 18.1 = 62.6/6.7 + 13.8 + 14.3 + 6.6 + 15.9 = 57.3; IV, 7.4 + 18.1 + 17.4 + 8.6 + 20.0 = 71.5/8.0 + 18.1 + 16.4 + 7.4 + 18.2 = 68.1. Abdomen ♀18.5, ♂14.4 long; ♀11.0, ♂8.2 wide.

Female and male. Carapace longer than wide (length/width ♀1.18, ♂1.15). Median ocular area slightly wider than long (length/width ♀0.98, ♂0.94); wider behind than in front (anterior width/posterior width ♀0.65, ♂0.63). Promargin of chelicera with 3 teeth, one of them very small; retromargin with 5(♀) or 4(♂) teeth. Labium as wide as long in female (length/width 1.00), slightly longer than wide in male (length/width 1.09). Sternum longer than wide (length/width ♀1.08, ♂1.11). Length of leg I/length of carapace ♀3.68, ♂4.61. Male palp: shapes and arrangement of sclerites as for the *fimbriatus*-group style (Carico 1973); cymbium with projection at posterior end (Fig. 10); length of tibia/length of cymbium 0.89, retrolateral side of tibia with well sclerotized black apophysis (Fig. 11). Abdomen longer than wide (length/width ♀1.68, ♂1.46). Female genitalia: shape of epigynum *fimbriatus*-group style (Carico 1973); with vase-shaped median elevation and well sclerotized border (Fig. 5), spermatheca well sclerotized, long and winding (Fig. 6).

Coloration and markings. Female. Carapace dark brown mottled with brown (Fig. 1). Metatarsi I and II with many short white hairs. Dorsum of abdomen dark brown mottled



Figs. 5–15. *Dolomedes orion* n. sp. (5–11), *D. yawatai* Ono 2002 (12–13), and *D. raptor* Bösenberg & Strand 1906 (14–15). — 5, epigynym; 6–9, 13, 15, female internal genitalia; 10, ventral view of male palp; 11, 12, 14, prolateral view of male palpal tibia (5–7, 10–11, Okinawa-jima Is.: 5–6, holotype NSMT-Ar 5307; 7, paratype NSMT-Ar 5308; 10–11, paratype NSMT-Ar 5308. 8, Amami-ôshima Is.; 9, Tokashiki-jima Is.; 12–13, Iriomote-jima Is.; 14–15, Tokyo and Toyama Prefectures of Honshu, respectively). Scales: 1mm except for Fig. 14 (0.5 mm).

with black. Male. Carapace dark brown, anterior half widely marginated with white, posterior half marginated with brown (Fig. 3). Abdomen dark brown mottled with black (Fig. 3).

Variation. Body length: ♀28.0–38.7 mm, ♂22.3–28.7 mm. Carapace length: ♀15.6–18.8 mm, ♂11.7–15.8 mm. Carapace width: ♀13.4–15.8 mm, ♂10.5–13.8 mm. Variation of spermathecae as in Figs. 6–9.

Remarks. The present new species resembles *Dolomedes yawatai* Ono 2002, but can be separated by the following points. 1) shape of median elevation of epigynum: both lateral sides almost parallel in *yawatai*, but vase-shaped in *orion* (Fig. 5). 2) shape of spermatheca: spiral in *yawatai* (Fig. 13), but not spiral in *orion* (Figs. 6–9). 3) length of tibia of male palp: short in *yawatai* (Fig. 12, length of tibia /length of cymbium 0.53, measured dorsal side), but long in *orion* (Fig. 11, length of tibia/length of cymbium 0.89). 4) shape of tibial apophysis of male palp: ventrally with two tips in *yawatai* (Fig. 12), but only single tip in *orion* (Fig. 11).

Notes. *D. orion* dwells in the mountain stream. Adult spiders are often found on the surface of huge rocks (Figs. 1–2) and young spiders are often found in the ambushing posture with their legs I, often both pairs of legs I and II, touching surface of the water as shown in fig.4.

Distribution. Japan (Amami-ôshima Is., Okinawa-jima Is., and Tokashiki-jima Is.).

Etymology. Specific name is derived from its large size.

Orion is a giant hunter in Greek Mythology.

Dolomedes yawatai Ono 2002
(Figs. 12–13)

Dolomedes yawatai Ono 2002, p.55, figs. 12–17 [female holotype from Ishigaki-jima Is., Okinawa Pref., Japan, preserved in National Science Museum, Tokyo (NSMT-Ar5196), not examined.]; Tanikawa 2003, p. 65, figs. 290–291.

Specimens examined. 1♀, Shirahama, 31–VII–2002; 1♀, Urauchi, 28–VII–2002; 1♀, Near Yutsun Cave, 29–VII–2002; 1 juv., Funaura, 31–III–1989 (molted to adult male on 16–IV–1989 after rearing); 1♀, Ôtomi, 13–VIII–1985; 1juv., Ôtomi, 30–IV–1990 (became adult male on 18–VI–1990); all specimens were collected by A. Tanikawa in Iriomote-jima Is., Okinawa Prefecture.

Diagnosis. As was mentioned by Ono (2002), *D. yawatai* can be separated from *D. raptor* Bösenberg & Strand 1906 by the shape of female spermatheca and tibial apophysis of male palp (Figs. 12–15).

Distribution. Japan (Ishigaki-jima Is. and Iriomote-jima Is.).

Dolomedes zatsun new species
[Japanese name: Sasaki-hashirigumo]
(Figs. 16–20)

Type series. Holotype: ♀, the source of Zatsun River, Kunigami-son, Okinawa-jima Is., Okinawa Pref., Japan, 12–VIII–1998, T. Sasaki leg. (NSMT-Ar5310).

Paratype: 1♂, Mt. Nishimedake, Kunigami-son, Okinawa-jima Is., Okinawa Pref., 24–IV–2000, T. Sasaki leg. (molted to adult male in captivity on 2–VI–2000. NSMT-Ar 5311).

Description. Based on the female holotype and male paratype. Measurements (in mm). Body ♀18.6, ♂13.9 long. Carapace ♀8.5, ♂7.5 long; ♀7.1, ♂6.4 wide. Length of legs [female/male; tarsus + metatarsus + tibia + patella + femur = total]: I, 3.3 + 6.4 + 7.4 + 3.7 + 7.9 = 28.7/4.6 + 8.0 + 8.1 + 3.3 + 8.3 = 32.3; II, 3.1 + 6.4 + 7.2 + 3.7 + 8.2 = 28.6/4.0 + 7.8 + 7.9 + 3.4 + 8.5 = 31.6; III, 2.7 + 6.1 + 6.2 + 3.1 + 7.5 = 25.6/3.2 + 6.8 + 6.9 + 3.0 + 7.5 = 27.4; IV, 3.5+ 8.5 + 8.0 + 3.5 + 8.8 = 32.3/4.2 + 9.1 + 8.3 + 3.2 + 8.9 = 33.7. Abdomen ♀9.5, ♂7.0 long; ♀6.2, ♂4.8 wide.

Female and male. Carapace longer than wide (length/width ♀1.20, ♂1.46). Median ocular area wider than long (length/width ♀♂0.89); wider behind than in front (anterior width/posterior width ♀0.63, ♂0.62). Promargin of chelicera with 3 teeth, one of them very small; retromargin with 4(♀) or 5(♂) teeth. Labium wider than long (length/width ♀0.91, ♂0.86). Sternum almost as long as wide (length/width ♀0.98, ♂1.03). Length of leg I/length of carapace ♀3.38, ♂4.31. Male palp: shapes and arrangement of sclerites as for the *fimbriatus*-group style, cymbium with digitiform projection at posterior end (Fig. 17); retrolateral side of tibia with well sclerotized black apophysis (Fig. 18). Abdomen longer than wide (length/width ♀1.53, ♂1.46). Female genitalia: shape of epigynum *fimbriatus*-group style; epigynum with vase-shaped median elevation and well sclerotized edge (Fig. 19), spermatheca well sclerotized, long and winding (Fig. 20).

Coloration and markings. Female. Carapace reddish brown marginated with white, posterior part dark brown. Dorsum of abdomen light brown, both sides of anterior part dark brown (Fig. 16). Male. Similar to female, but white margin of carapace wider.

Remarks. The present new species can be easily sepa-

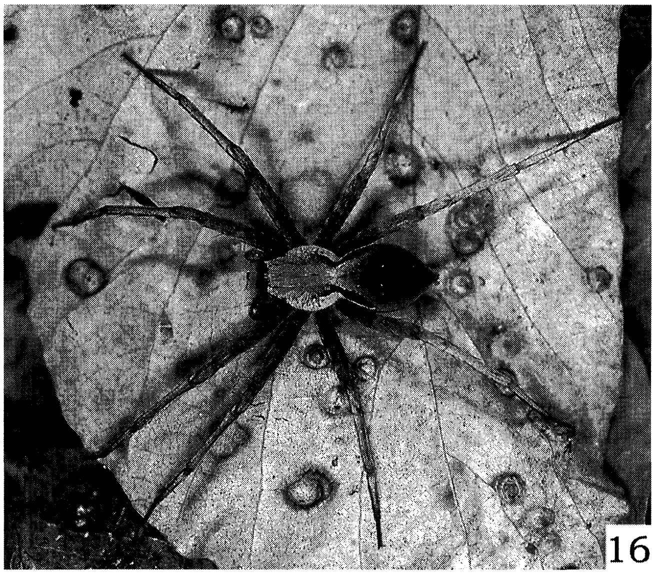
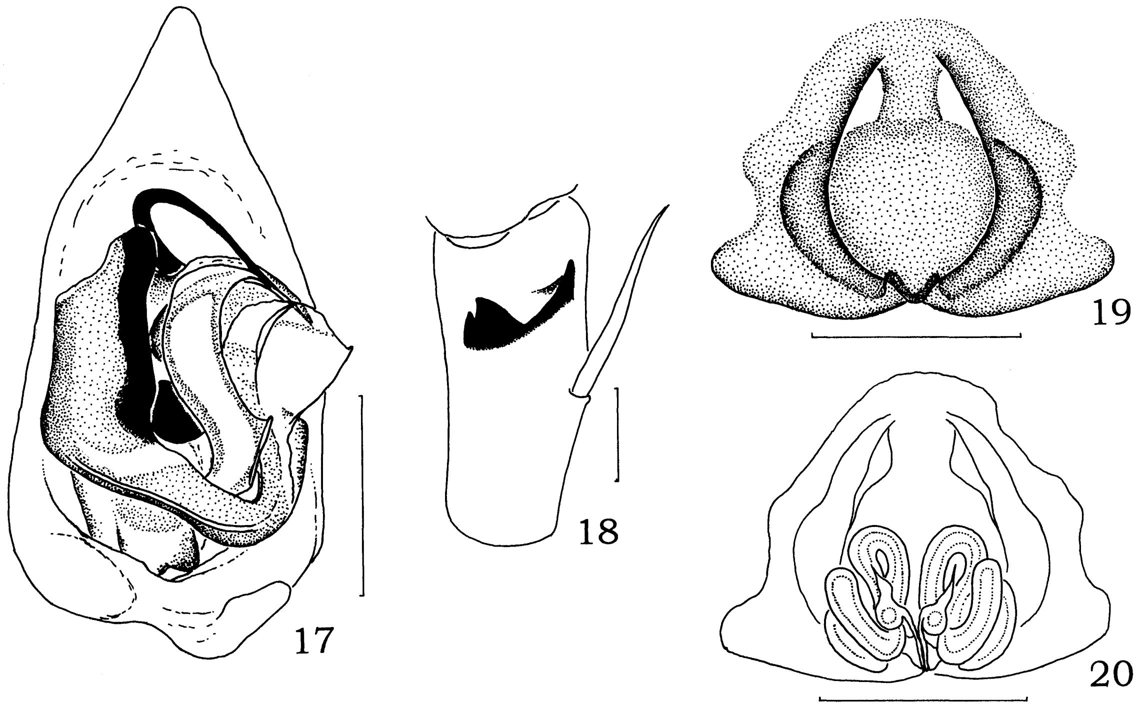


Fig. 16. *Dolomedes zatsun* n. sp. Habitus (holotype, female, NSMT-Ar 5310, from Okinawa-jima Is.).



Figs. 17–20. *Dolomedes zatsun* n. sp. — 17, male palp, ventral view (paratype, NSMT-Ar5311); 18, tibia of male palp, prolateral view (paratype, NSMT-Ar5311); 19, epigynum (holotype, NSMT-Ar5310); 20, female internal genitalia, dorsal view (holotype, NSMT-Ar5310). Scales: 1mm.

rated from the other congeners by its unique coloration and markings.

Distribution. Japan (Okinawa-jima Is.).

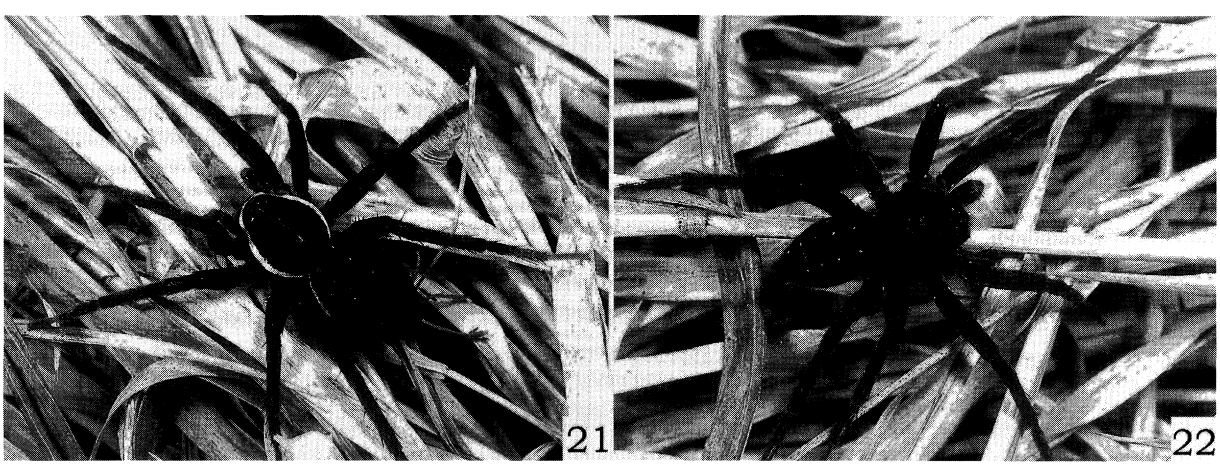
Etymology. Specific name is derived from its native area.

Dolomedes horishanus Kishida 1936
[Japanese name: Herijiro-hashirigumo]
(Figs. 21–26)

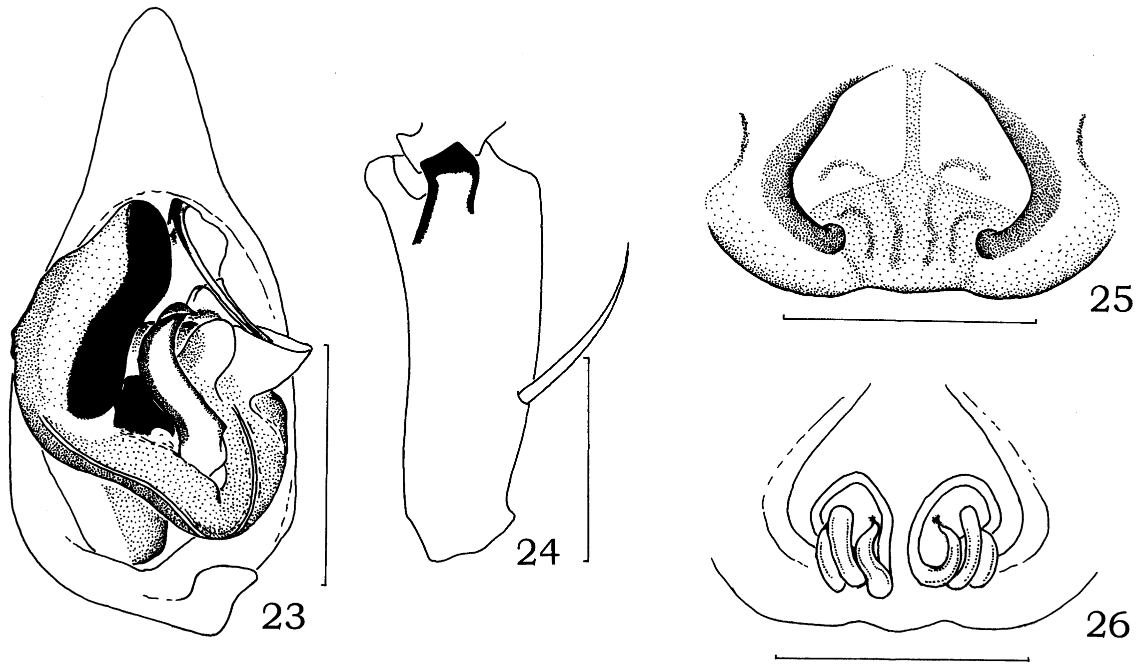
Dolomedes horishanus Kishida 1936, p. 119, pl. 8, fig. 9. [Type specimens from Taiwan, depository unknown, lost.]

Dolomedes mizhoanus Kishida 1936, p.120, pl.8, fig. 10. [Female holotype from Taiwan, may be lost.] **NEW SYNONYMY**

Specimens examined. 1♀, Nakanoshima Is., Toshima-mura, Kagoshima Pref., 5–X–1999, Y. Baba leg. (NSMT-Ar5312), 1 ♀, Kin, Okinawa-jima Is., Okinawa Pref., 18–VI–1997, T. Sasaki leg. (NSMT-Ar 5313); 1♂, Mt. Omoto-dake, Ishigaki-jima Is., Okinawa Pref., 2–III–2000, Y. Baba leg. (NSMT-Ar 5314). 1♂,



Figs. 21–22. *Dolomedes horishanus* Kishida 1936 — 21, white margin type female (Iriomote-jima Is.); 22, non-marginated type female (Iriomote-jima Is.).



Figs. 23–26. *Dolomedes horishanus* Kishida 1936 — 23, male palp, ventral view (NSMT-Ar5315); 24, tibia of male palp, prolateral view (NSMT-Ar5315); 25, epigynum (NSMT-Ar5316); 26, female internal genitalia, dorsal view (NSMT-Ar5316). Scales: 1mm.

Sonai, Iriomote-jima Is., Okinawa Pref., 3–I–1986, A. Tanikawa leg. (NSMT-Ar 5315). 1♀, Iriomote-jima Is., Okinawa Pref., 27–III–1986, A. Tanikawa leg. (NSMT-Ar5316); 1♀, Kubura, Yonaguni-jima Is., Okinawa Pref., 5–X–2000, J. Nakajima leg. (NSMT-Ar 5317),

Description. Based on a female and a male from Iriomote-jima Is. Measurements (in mm). Body ♀15.5, ♂13.1 long. Carapace ♀7.5, ♂7.2 long; ♀6.8, ♂6.5 wide. Length of legs [female/male; tarsus + metatarsus + tibia + patella + femur = total]: I, 2.7 + 5.2 + 6.2 + 3.5 + 7.0 = 24.6/4.6 + 6.5 + 6.8 + 3.5 + 7.5 = 28.9; II, 2.8 + 5.2 + 6.0 + 3.6 + 7.3 = 24.9/4.3 + 6.2 + 6.3 + 3.6 + 7.5 = 27.9; III, 2.7 + 5.1 + 5.2 + 3.2 + 6.6 = 22.8/3.4 + 5.4 + 5.3 + 2.9 + 6.8 = 27.4; IV, 3.5+ 6.9 + 6.9 + 3.2 + 8.2 = 28.7/4.8 + 7.6 + 7.0 + 3.1 + 7.9 = 30.4. Abdomen ♀8.5, ♂5.7 long; ♀5.9, ♂4.3 wide.

Female and male. Carapace longer than wide (length/width ♀1.10, ♂1.12). Median ocular area wider than long (length/width ♀♂0.96); wider behind than in front (anterior width/posterior width ♀♂0.67). Promargin of chelicera with 3 teeth, one of them very small; retromargin with 4 teeth. Femora IV ventrally with many black hairs. Labium wider than long (length/width ♀0.86, ♂0.88). Sternum almost wider than long (length/width ♀0.89, ♂0.91). Length of leg I/length of carapace ♀3.28, ♂4.01. Male palp: shapes and arrangement of sclerites as for *fimbriatus*-group style; cymbium with a digitiform projection at posterior end (Fig. 23); retrolateral side of tibia with well sclerotized apophysis (Fig. 24). Abdomen longer than wide (length/width ♀1.44, ♂1.31). Female genitalia: shape of epigynum *fimbriatus*-group style; epigynum with inverted Y-shaped median elevation and well sclerotized edge (Fig. 25), spermatheca weakly sclerotized, long and winding (Fig. 26).

Coloration and markings. Female. Carapace dark brown marginated with white (Fig. 21). Dorsum of abdomen dark brown marginated with white (Fig. 21). Male. Similar to female, but without white margin.

Variation. Body length ♀15.5–18.7 mm, ♂12.7–15.0 mm. Carapace length ♀7.5–8.7 mm, ♂6.5–7.4 mm, width ♀6.8–7.6 mm, ♂5.9–6.8 mm. Abdomen length ♀6.8–9.8 mm, ♂5.7–7.1 mm, width ♀5.0–7.4 mm, ♂4.0–4.7 mm. Two types of coloration are recognized both in female and male. In the one form (marginated form) carapace and abdomen are marginated with white (Fig. 21), while in the other they are not marginated (Fig. 22).

Remarks. Kishida (1936) cited this species as *"Dolomedes horishanus* Kishida, 1912". However, it seems that no copies of the journal issue "Arachnol, Vol. 1, 1912" wherein the original description of the species allegedly appeared has been circulated. Therefore, Kishida (1936) was later assigned as the original description of the species. Likewise, actual publication of the Lanzania Vol. 7. No. 59 (1935) issue, which was designated by Kishida (1936) as the journal that contains original description of another Taiwanese species, *Dolomedes mizhoanus* Kishida is also dubious. Judging from the original figure made by Kishida (1936), *Dolomedes mizhoanus* evidently belongs to the non-marginated type of *Dolomedes horishanus*.

Distribution. Japan (Nakanoshima Is., Okinawa-jima Is.,

Ishigaki-jima Is., Iriomote-jima Is., and Yonaguni-jima Is.), Taiwan.

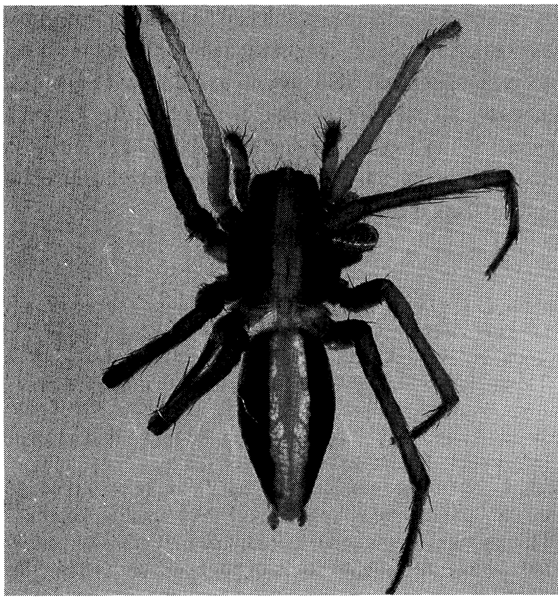
Genus *Pisaura*
Pisaura bicornis Zhang & Song 1992
[Japanese name: Saihô-kishidagumo]
(Figs. 27–30)

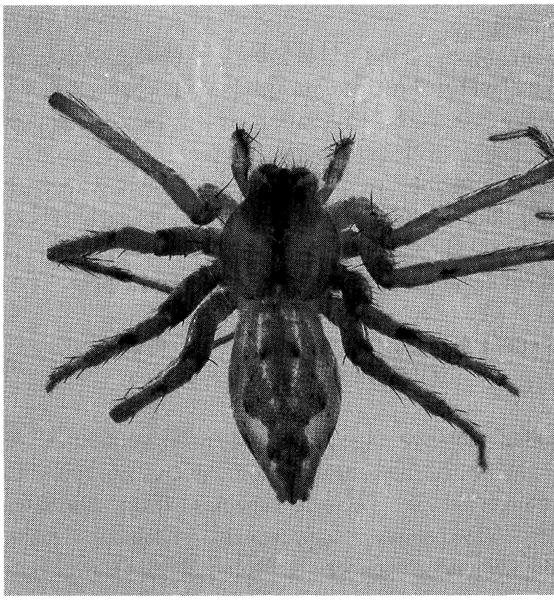
Pisaura bicornis Zhang & Song 1992, p. 17, fig. 1. [Female holotype from Ningbo, Zhejiang Province, China, not examined]; Song, Zhu & Chen 1999, p. 348, fig. 204B–C, I-J; Zhang 2000, p. 2, fig. 2.

Pisaura lantanus Wang 1992, p. 158; Song, Zhu & Chen 1999, p. 348, fig. 204E.

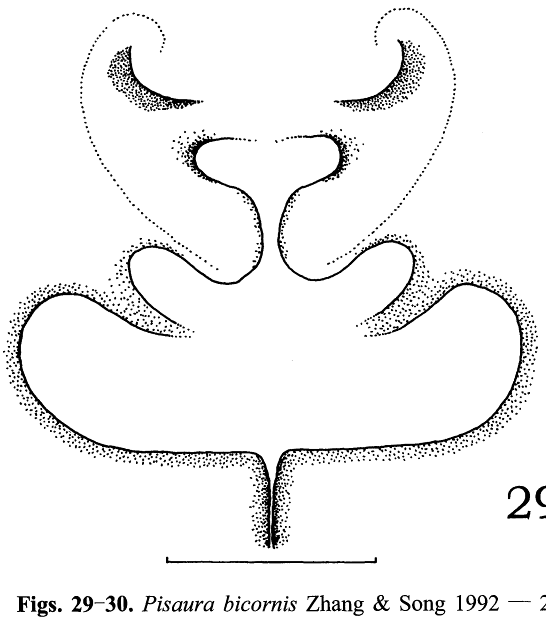
Specimens examined. 2♀, Shinrin-kôen, Yonaguni-jima Is., Okinawa Pref., 7–III–2000, Y. Baba leg. (NSMT-Ar 5318–5319).

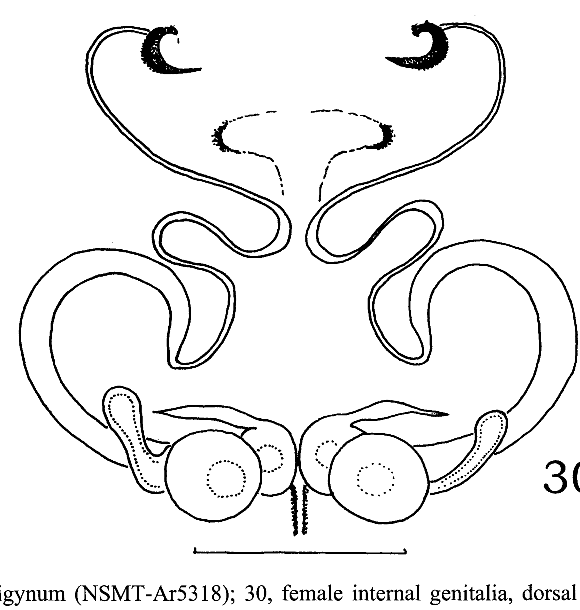
Description. Based on a female from Yonagunijima Island. Male unknown in Japan. Measurements (in mm). Body 8.0 long. Carapace 3.2 long; 2.6 wide. Length of legs [tarsus + metatarsus + tibia + patella + femur = total]: I (probably regenerated), 1.2 + 2.2 + 2.3 + 1.0 + 2.6 = 9.3; II, 1.3 + 3.1 + 3.4 + 1.3 + 3.5 = 12.6; III, 1.1 + 2.6 + 2.4 + 1.1 + 3.0 = 10.2; IV, 1.3 + 3.4 + 2.8 + 1.1+3.6 = 12.2.


27


28

Figs. 27–28. *Pisaura bicornis* Zhang & Song 1992. Habitus. (NSMT-Ar5318–5319).


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Figs. 29–30. *Pisaura bicornis* Zhang & Song 1992 — 29, epigynum (NSMT-Ar5318); 30, female internal genitalia, dorsal view (NSMT-Ar5318). Scales: 0.25 mm.

Abdomen 4.5 long; 2.2 wide.

Female. Carapace longer than wide (length/width 1.20). Median ocular area slightly wider than long (length/width 0.96); wider behind than in front (anterior width/posterior width 0.65). Chelicera with 4 promarginal and 3 retromarginal teeth. Labium wider than long (length/width 0.71). Sternum slightly longer than wide (length/width 1.03). Length of leg I/length of carapace 2.9. Female genitalia: epigynum weakly sclerotized, shape unique as in Fig. 29, intromittent canal log and winding, spermatheca weakly sclerotized (Fig. 30).

Coloration and markings. Female. Carapace reddish brown with yellow longitudinal median band. Dorsum of abdomen reddish brown with longitudinal yellow median band (Fig. 27).

Variation. Body length 7.8–8.0 mm. Carapace length 3.1–3.2 mm, width 2.6–2.7 mm. Abdomen length 4.5–4.6 mm, width 2.2–2.5 mm. Coloration of the two specimens examined is quite different from each other. One is as mentioned above and the other is: carapace brown with dark brown mid-line, abdomen pale brown with dark brown markings (Fig. 28).

Distribution. Japan (Yonaguni-jima Is.) and China.

Pisaurid species removed from the fauna of Okinawa Prefecture

Other than the seven species listed in "Introduction" of this paper, names of the following four species are found in the literature as the pisaurid species from Okinawa Prefecture: *Dolomedes okinavensis* Kishida 1924, *Dolomedes saganus* Bösenberg & Strand 1906, *D. sulfureus* L. Koch 1878, and *Perenethis fascigera* (Bösenberg & Strand 1906). However, as already stated in the checklist of Okinawan spiders (Tanikawa & Sasaki 1999), I consider that these four species should be removed from the spider fauna of Okinawa Prefecture. The reasons for this are dual: 1) No specimens of the four species have been collected during our 20-year surveys; and 2) Those literature records are accompanied by neither any figures of the specimens nor any voucher specimens. *Dolomedes okinavensis* may be the exception, since it was originally described from Okinawa Island. However, this species should also be erased from the list because identy of the species is extremely uncertain as noted below.

Dolomedes okinavensis Kishida 1924, ***nomen dubium***

Dolomedes okinavensis Kishida 1924, p. 518, fig. 7 (subadult male holotype collected from Kazuu-hama, Okinawa-jima Is. on 28 March 1924 by Yaichiro Okada, preserved in Zoological Institute, Faculty of Science, the University of Tokyo, lost); Kishida 1936, p. 119 (here Kishida stated the type specimen was collected on 11 April 1924)

Notes. This species is only known by a single immature male designated as the type. Kishida (1924) considered that the species most resembles *Dolomedes sulfureus* L. Koch 1878, which is one of the most commonly found *Dolomedes* species in the main islands of Japan, and enumerated many differences between the two species by comparing subadults of the both species. However, Kishida did not make it clear whether the character states listed for *D. sulfurous* are properly based on subadult "male(s)". Furthermore, most of the diagnostic characters enumerated by him seem to be trivial. The type specimen also seems to be lost. Due to these circumstances, it is impossible to clarify the identity of the species. Thus I consider the species to be a *nomen dubium* and the species name should be removed from the spider fauna of Japan as an invalid name.

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Received April 15, 2003/Accepted May 29, 2003

Acta Arachnologica Vol. 52, No. 1 掲載論文の和文要旨

ゴミグモ（クモ目：コガネグモ科）のゴミリボンが餌捕獲に及ぼす影響（pp. 1–3）

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本研究ではゴミグモ（*Cyclosa octotuberculata*）のゴミリボンが獲物の行動に影響を与え，餌捕獲数に影響を及ぼすという仮説を検証した．実験的にゴミリボンのある網と無い網を作成し，野外で餌捕獲数を比較したところ有意な差はなかった．またその他の要因を考慮にいれて重回帰分析を行ったが，餌捕獲数への影響はみとめられなかった．この結果よりゴミリボンが網上の大きな構造物にも関わらず獲物に対して視覚的効果をもたない可能性が考えられる．

札幌市近郊におけるザトウムシの季節消長と生態，およびエゾナミザトウムシとその近縁種についての分類学的ノート（pp. 5–24）

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札幌市近郊の 3 カ所（野幌，円山，北大構内）に生息するザトウムシ 11 種の季節消長と生態を調査した．ほとんどの種は年 1 化卵越冬の生活史を示したが，フタコブザトウムシ *Paraumbogrella pumilio* は年 1 化成体越冬，マキノブラシザトウムシ *Sabacon makinoi* では卵と幼体の両方での越冬が示唆された．四国に生息するザトウムシと比較すると，幼体越冬の種を欠くことが北海道産種の生活史の特徴である．卵越冬の種では，春季により早く孵化する種ほど幼体期間が長かった．また，卵越冬のほとんどの種で雌が雄よりも早く成体に達する傾向（雌先熟）がみられた．雌先熟は他のクモガタ綱や昆虫では非常に珍しいが，マザトウムシ上科 Phalangioidea のザトウムシでは一般的傾向と思われる．長い繁殖期間と雌の多数回交尾が一般的であることが雌先熟傾向を生み出しているのかもしれない．土壌性の 3 種（ブラシザトウムシ属 *Sabacon* 2 種とフタコブザトウムシ *P. pumilio*）をのぞき，どの種も幼体初期には土壌リター中で過ごすが，幼体期の途中から，草本層や樹幹へ日中の生息場所を移した．両生生殖の 3 種では性比は雄に偏る傾向がみられた．雌先熟とも関係して，性比は時間的にも変化した．7 種の産卵数と 10 種の卵サイズのデータを示した．ブラシザトウムシ科の 2 種の卵のうを初めて記録した．さらに，学名が未決定であったエゾナミザトウムシに対して *Nelima suzukii* の名称を与え，ナミザトウムシ属の分類について若干の知見を付記した．

韓国及び日本産のケムリグモ属（クモ目：ワシグモ科）数種についての分類学的検討（pp. 25–30）

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ケムリグモ属 *Zelotes* の数種について分類学的検討の結果を報告した．韓国で記載されたミカドケムリグモ *Z. kimwha* Paik 1986 と *Z. tintinnus* Paik 1986 については，同一地点から採集された雌雄の標本を検討した結果，後者を前者の新参異名とした．北海道に分布するコブシケムリグモ *Z. hayashii* Kamura 1987 とビフカケムリグモ *Z. bifukaensis* Kamura 2000 については，前者の雌雄及び後者の雄のみが知られており，後者の雌は未知であったが，新たな標本を検討した結果，従来コブシケムリグモの雌とみなされていたものは正しくはビフカケムリグモの雌であることが判明し，同時に，真のコブシケムリグモの雌も見出された．沖縄産のリュウキュウケムリグモ *Z. ryukyuensis* Kamura 1999 とツヅラケムリグモ *Z. flexuosus* Kamura 1999 については，前者の雌雄及び後者の雌のみが知られており，後者の雄は未知であったが，沖縄島における再調査の結果，これら 2 種の雄の触肢の構造は互いに極めてよく似ており，リュウキュウケムリグモの雄とみなされていたものの中にツヅラケムリグモの雄が混じっていたことが判明した．

東京都青梅市の山林から発見されたササラダニ類（イカダニ科）の 1 新種（pp. 31–33）

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青梅市の北部に広がる黒沢川沿いのコナラを主とする林の林床の倒木の樹皮から,イカダニ科に属するササラダニ類の未記載種が見出されたので *Dolicheremaeus ohmensis* オウメイカダニと命名して記載した．イカダニ科の多くの種では後体部前縁に 2 対の瘤状突起があるが，本種を含めて 6 種では,その突起が 1 対しかない．その中で本種は胴感毛の柄が短く先端部が強く膨らむこと，背毛が短いものと著しく長いものの 2 群に分かれることなどによって，既知の 5 種から区別される．

日本産キシダグモ科の 2 新種および 2 新記録種（pp. 35–42）

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日本産キシダグモ科の 2 新種，*Dolomedes orion* n. sp.オオハシリグモ（新称）と *Dolomedes zatsun* n. sp.ササキハシリグモ（新称）を記載し，*Dolomedes horishanus* Kishida 1936 ヘリジロハシリグモと *Pisaura bicornus* Zhang & Song 1992 サイホウキシダグモ（新称）の 2 種を日本から新たに記録し，再記載した．また，*Dolomedes yawatai* Ono 2002 イシガキアオグロハシリグモを西表島から新たに記録した．台湾から知られていた *Dolomedes mizhoanus* Kishida 1936 はヘリジロハシリグモの新参シノニムである．